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By 

PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Stephen Savitzky, et al.

Application No.: 09/302,552

Filed: April 30, 1999

For: DOCUMENT STORAGE SYSTEM
INCLUDING A USER INTERFACE
FOR ASSOCIATING DOCUMENTS
INTO GROUPS

Confirmation No. 7040

Examiner: Nguyen, Maikhanh

Technology Center/Art Unit: 2176

APPELLANTS' BRIEF UNDER
37 CFR §41.37

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Further to the Notice of Appeal mailed on May 30, 2006 for the above-referenced application and in response to the Notification of Non-Compliant Appeal Brief (37 CFR §41.37) mailed August 31, 2007, Appellants submit this Substitute Appeal Brief. The Notification indicated that the section entitled *Summary of the Claimed Subject Matter* appearing in the Appeal Brief did not contain a concise explanation of the subject matter defined in each of the claims involved in the appeal pursuant to 37 CFR §41.37(c)(1)(v). The Notice indicated that according to 37 CFR §41.37(c)(1)(v), Applicants must provide a concise explanation of the subject matter for dependent claims 2-8 and 10-13.

Appellants respectfully disagree with this requirement. According to 37 CFR §41.37(c)(1)(v), a concise explanation of the subject matter defined in each independent claim and in each dependent claim argued separately in the appeal is required. Appellants have

provided a concise explanation of independent claims 1 and 9, and, in order to expedite this appeal, Appellants have also included a concise explanation of dependent claims 4 and 5, which have been argued separately in this Appeal Brief. Therefore, Appellants submit that the Appeal Brief is in compliance with 37 CFR §41.37.

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1. REAL PARTY IN INTEREST

All right, title, and interest in the subject invention and application are assigned to Ricoh Company, Ltd., of Tokyo, Japan. Therefore, Ricoh Company, Ltd. is the real party in interest.

2. RELATED APPEALS AND INTERFERENCES

None.

3. STATUS OF CLAIMS

Claims 1-13 are pending and stand rejected. The Appellants appeal the rejection of claims 1-13.

4. STATUS OF AMENDMENTS

On May 30, 2006, a response to a final rejection was filed. No claims were amended in this response and there are no amendments awaiting entry.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to the field of electronic document storage and retrieval, with features that allow a set of electronic documents to be associated together (referred to as "stapling"), to be manipulated as a unit, and to indicate that the set of electronic documents is complete and that no electronic documents in the set have been removed or otherwise tampered with. The present invention computes a cryptographic checksum of the combination of multiple electronic documents, "thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time." (Claims 1 and 9). By computing a cryptographic checksum of a set of electronic documents, "the stapling operation is cryptographically enforced so that no document can be altered or removed from the collection (i.e., the 'stapled stack')." (specification p. 8, lines 6-8).

Independent claims 1 and 9 are pending in the present application. Claim 1 is directed to a computer implemented method for manipulating documents in an electronic document handling system. (e.g., specification p. 3, line 19; Figure 1; Figure 2). The method

includes generating a staple data object (e.g., specification p. 4, lines 31-33; Figure 2, block "Initialize Stacks as Necessary").

The method of claim 1 also includes generating an electronic cover sheet (e.g., specification, p. 4, lines 17-22 p. 5, lines 15-23; Figure 1, reference 112; Figure 2, block "Generate Stack Cover Sheet, Cryptographic Key").

The method of claim 1 includes accepting from a user a list of at least one page of at least two electronic documents (e.g., specification p. 3, line 31 to p. 4 line 1; Figure 2, block labeled "Accept Documents to Add to Stack").

The method of claim 1 includes referencing each page or each electronic document in the list as an item of the staple data object (e.g., specification p. 4, lines 17-22; Figure 2, block labeled "Add Documents to Stack").

The method of claim 1 includes accepting a staple instruction from a user (e.g., specification p. 4, lines 21-22b; Figure 2, block labeled "Accept Stack Selection").

The method of claim 1 includes cryptographically securing the combination of the pages of at least two electronic documents of the staple data object in response to receipt of the staple instruction, thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time (e.g., specification p. 5, lines 16-23; p. 6, lines 27-33).

Claim 4 depends from claim 1, and further includes presenting a user with an online form as an aid to selecting pages or documents for association as a stack (e.g. specification, p. 4 lines 19-28; Fig. 1, reference 104).

Claim 5 depends from claim 1, and further includes prompting for the staple instruction by presenting the user with a stapler icon which, when selected, represents the staple instruction (e.g. specification, p. 4, lines 21-22, Fig. 1, reference 120).

Claim 9 is directed to a computer implemented method for manipulating documents in an electronic document handling system (e.g., specification p. 3, line 19; Figure 1; Figure 2). The method of claim 9 includes generating a stack object (e.g., specification p. 4, lines 31-33; Figure 2, block "Initialize Stacks as Necessary").

The method of claim 9 includes generating an electronic cover sheet (e.g., specification, p. 4, lines 17-22; p. 5 lines 15-23; Figure 1, reference 112; Figure 2, block "Generate Stack Cover Sheet, Cryptographic Key").

The method of claim 9 includes accepting from a user a list of at least one page of at least one electronic document (e.g., specification p. 3, line 31 to p. 4 line 2; Figure 2, block labeled "Accept Documents to Add to Stack").

The method of claim 9 includes referencing each page or each electronic document in the list as an item of the stack object (e.g., specification p. 4, lines 17-22; Figure 2, block labeled "Add Documents to Stack").

The method of claim 9 includes accepting a staple instruction from a user (e.g., specification p. 4, lines 21-22; Figure 2, block labeled "Accept Stack Selection").

The method of claim 9 includes cryptographically securing the stack object in response to receipt of the staple instruction, thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time (e.g., specification p. 5, lines 9-12 and lines 16-23; p. 6, lines 27-33).

The method of claim 9 includes opening a secured stack upon receipt of a stack open instruction (e.g., specification p. 7, lines 5-6; claim 9 as filed, line 12).

The method of claim 9 includes presenting the contents of the secured stack for perusal by the user (e.g., specification p. 7, lines 5-6; p. 6, lines 10-19; claim 9 as filed, line 13).

The method of claim 9 includes accepting additions and deletions of items on the secured stack (e.g., specification p. 7, lines 5-6; p. 4, line 33 to p. 5, line 3; claim 9 as filed, line 14).

The method of claim 9 includes resecuring the secure stack upon receipt of a stack restaple operation (e.g., specification p. 7, lines 5-6; claim 9 as filed, line 15).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Are claims 1-3 and 6-13 obvious under 35 U.S.C. 103(a) over U.S. Patent No. 5,179,718 (MacPhail) in view of U.S. Patent No. 6,401,206 (Khan)?

2. Are claims 4-5 obvious under 35 U.S.C. 103(a) over U.S. Patent No. 5,179,718 (MacPhail) in view of U.S. Patent No. 6,401,206 (Khan) and further in view of "IBM Technical Disclosure Bulletin," issued 07/1992?

7. ARGUMENT

7.1 The cited references do not disclose or suggest cryptographically securing a combination of electronic documents.

The Examiner has rejected claims 1-3 and 6-13 as being unpatentable over MacPhail (U.S. Patent No. 5,179,718) in view of Khan (U.S. Patent No. 6,401,206). Claim 1 recites in part:

cryptographically securing the combination of the pages of at least two electronic documents of staple data object in response to receipt of the staple instruction, thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time. (Emphasis Added)

Claim 9 recites a similar element. The Appellants respectfully submit that neither MacPhail nor Khan disclose or suggest this element.

The Examiner agrees with the Appellants that MacPhail does not teach the use of cryptography (p. 4, Office Action of 11/29/2005), and the Appellants respectfully submit that Khan fails to disclose or suggest the use of cryptography for "securing the combination of pages of at least two electronic documents," as recited by claim 1.

The Examiner cites the Abstract of Khan and Col. 11, lines 23-34, as teaching the use of cryptography. The cited portion of the abstract of Khan states "Document and digital identity verification including a verifying a cryptographic digital signature that establishes the integrity of the document." Similarly, column 11, lines 23-34 describe a process of "carry[ing] the electronic impressions, made by a digital identity on a given document, with the document itself using the conventional cryptographic systems."

Khan does not disclose that cryptography or a single indicator can be used to protect the integrity of the association of multiple documents. In both portions of Khan cited by the Examiner, Khan clearly discloses that a single digital signature is used to protect the integrity

of a single document. Khan does not disclose that a single digital signature can to protect the integrity of the association of multiple documents. In fact, Khan does not disclose or suggest associating multiple documents together for any purpose. Therefore, Appellants respectfully submit that Khan does not disclose or suggest cryptographically securing an object, “creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time,” as recited by claims 1 and 9.

7.2 There is no suggestion or motivation to modify and combine the reference to produce the claimed invention.

In response to the Appellants’ previous remarks, the Examiner argues that MacPhail, which “teaches securing a staple object, ‘creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time,’” may be combined with Khan “to teach the use of cryptography” (p. 9, Office Action of 11/29/2005).

MPEP 2143.01 states that “obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” (MPEP 2100-130).

The Appellants respectfully submit that there is no suggestion or motivation in the art to combine or modify the references to meet at least the above-recited claim limitation of “cryptographically securing the combination of the pages of at least two electronic documents ... thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time,” as recited by claim 1.

Khan discloses the use of cryptography for “verifying a cryptographic digital signature that establishes the integrity of a document.” (Khan, Abstract). As discussed above, Khan discloses using cryptography only for protecting the integrity of a single document. Khan does not disclose or suggest associating multiple documents together for any purpose, let alone applying cryptography to create “an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time.”

In the case of MacPhail, there is nothing in MacPhail that discloses or suggests using cryptography or any other means to provide “an unalterable indicator of the existence and integrity of the association” of documents. To the contrary, MacPhail allows staple relationships to be freely modified or deleted without leaving any evidence.

According to MacPhail, “the stapler parameters are preserved within the document until the document is deleted from a document library or the document is unstapled by its last document.” (MacPhail, Col. 6, lines 10-13) (Emphasis Added). “The history option . . . is deleted when the document is unstapled by another document and created when the document is stapled by another document.” (MacPhail, Col. 6, lines 15-19) (Emphasis Added). Thus, users of MacPhail can freely delete documents from a staple relationship without leaving any evidence that the staple relationship previously existed.

This contravenes explicit language of the claims, which recite “creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time.” (Emphasis Added).

MacPhail does not provide any suggestion or motivation for preserving or protecting the integrity of a staple relationship. Khan does not provide any suggestion or motivation for associating multiple documents together for any purpose. Thus, there is no motivation in the art to combine MacPhail and Khan.

Because neither MacPhail nor Khan disclose or suggest cryptographically securing the combination of electronic documents, “thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time,” Appellants respectfully submit that claims 1 and 9, as well as their respective dependent claims, are patentable over the cited references.

7.3 Rejection of Claims 4-5 under 35 U.S.C. § 103(a)

The Examiner has rejected claim 4 and 5 as unpatentable over MacPhail and Khan in view of “IBM Technical Disclosure Bulletin.” As discussed above, neither MacPhail nor Khan disclose or suggest cryptographically securing the combination of electronic documents, “thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time,” as recited by claim 1.

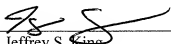
The Appellants submit that claims 4 and 5 are patentable by virtue of their dependence on patentable independent claims. Additionally, there is nothing in "IBM Technical Disclosure Bulletin" that discloses or suggests any need or means for protecting document integrity. Appellants therefore respectfully submit that claims 4 and 5 are patentable for this reason as well.

8. CONCLUSION

For the above reasons, it is respectfully submitted that the rejections of claims 1-13 should be reversed.

Respectfully submitted,

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9. CLAIMS APPENDIX

1. (Previously Presented) In an electronic document handling system, a method of manipulating documents comprising the steps of:

generating a staple data object, for representing an association of selected pages of at least two selected documents;

generating an electronic cover sheet for the staple data object;

accepting from a user a list of at least one page of at least two electronic documents;

referencing each page or each electronic document in the list as an item of the staple data object;

accepting a staple instruction from a user; and

cryptographically securing the combination of the pages of at least two electronic documents of the staple data object in response to receipt of the staple instruction, thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time.

2. (Original) The method of claim 1, wherein the step of accepting a list is a step of accepting a manually input list.

3. (Original) The method of claim 1, wherein the step of accepting a list is a step of accepting a computer-generated list.

4. (Original) The method of claim 1, further comprising a step of presenting a user with an online form as an aid to selecting pages or documents for association as a stack.

5. (Original) The method of claim 1, further comprising a step of prompting for the staple instruction by presenting the user with a stapler icon which, when selected, represents the staple instruction.

6. (Original) The method of claim 1, further comprising a step of copying the selected pages and selected documents in a stack to static storage.

7. (Original) The method of claim 1, further comprising a step of copying the selected pages and selected documents in a stack to a local storage device local to the electronic document handling system.

8. (Original) The method of claim 1, further comprising the steps of:
displaying a first list of documents, wherein the first list of documents lists the documents that are selected for inclusion in an open stack;
displaying a second list of documents, wherein the second list of documents list documents that have not been selected for inclusion in an open stack; and
displaying a user interface control operative to obtain selections from a user of documents from the second list for inclusion in an open stack.

9. (Previously Presented) In an electronic document handling system, a method of associating documents comprising the steps of:
generating a stack object, for representing an association of selected pages and selected documents;
generating an electronic cover sheet for the stack object;
accepting from a user a list of at least one page of at least one electronic document;
referencing each page or each electronic document in the list as an item of the stack object;
accepting a staple instruction from a user;
cryptographically securing the stack object in response to receipt of the staple instruction, thereby creating an unalterable indicator of the existence and integrity of the association of selected pages and selected documents together at one time;
opening a secured stack upon receipt of a stack open instruction;
presenting the contents of the secured stack for perusal by the user;
accepting additions and deletions of items on the secured stack; and
resecuring the secure stack upon receipt of a stack restaple operation.

10. (Previously presented) The method of claim 1 wherein the step of cryptographically securing the stack object in response to receipt of the staple instruction further comprises:

using a stack signature to secure the stack object, wherein the stack signature is a checksum of the contents of all of the selected pages and selected documents in the stack, signed by the digital signature of a user or the digital signature or private key of a system.

11. (Previously presented) The method of claim 10 wherein the step of generating an electronic cover sheet for the stack object further comprises:

storing the electronic cover sheet in a stack database, where it can be referenced.

12. (Previously presented) The method of claim 1 wherein the step of generating an electronic cover sheet for the stack object further comprises:

generating controls for adding and deleting selected pages and selected documents from the stack.

13. (Previously presented) The method of claim 1, wherein the electronic cover sheet includes a visual indication that the existence of the association of selected pages and selected documents together at one time has been cryptographically secured by the staple data object.

10. EVIDENCE APPENDIX

None.

11. RELATED PROCEEDINGS APPENDIX

None.